

I claim:

1. A pair of wind turbines wherein each wind turbine comprises:

a shaft that rotates about a vertical axis, and

a blade attached to said shaft for rotation therewith wherein said blade is spaced radially

5 outward from said shaft by a predetermined radius,

wherein the shafts of said pair of wind turbines are separated from each other by a

distance that is less than three times said radius.

2. The wind turbines of claim 1 wherein said shaft of a first one of said wind

turbines rotates in a first predetermined direction and said shaft of a second one of said

10 wind turbines rotates in the opposite direction as said one of said wind turbines.

3. The wind turbines of claim 1 wherein said shafts of said pair of wind turbines are

separated from each other by a distance that is greater than two times said radius but less

than two times said radius plus ten feet.

4. The wind turbines of claim 3 wherein said shafts of said pair of wind turbines are

15 separated from each other by a distance that is greater than two times said radius but less

than two times said radius plus 5 feet.

5. The wind turbines of claim 3 wherein said shafts of said pair of wind turbines are

separated from each other by a distance that substantially equal to two times said radius

plus 3 feet.

20 6. The wind turbines of claim 1 wherein said wind turbines have a rotor solidity that

is greater than 30% and less than 40%.

7. The wind turbines of claim 6 wherein said wind turbines have a rotor solidity that

is substantially 33%.

8. The wind turbines of claim 1 wherein said wind turbines further comprise a fail-safe braking system.

9. The wind turbines of claim 8 wherein said braking system is self-resetting.

10. The wind turbine of claim 8 wherein said braking system includes a pneumatic actuator.

11. The wind turbine of claim 10 wherein a single air compressor provides compressed air for said pneumatic actuator for both wind turbines in said pair of wind turbines.

12. The wind turbines of claim 1 further comprising a third wind turbine wherein said third wind turbine comprises:

a tower,

a shaft that rotates about a substantially horizontal axis,

a blade attached to said shaft for rotation therewith wherein the swept path of said blade defines a rotor with upper and lower extreme heights, and

15 wherein said horizontal axis wind turbine is arranged adjacent said pair of vertical axis wind turbines such that said lower extreme height of said horizontal axis wind turbine is taller than the top of said vertical axis wind turbines.

13. The wind turbines of claim 1 wherein said wind turbines are installed at a location with a prevailing wind direction and wherein a line between the shafts of said pair of
20 wind turbines is substantially perpendicular to said prevailing wind direction.